



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,276	09/26/2006	Hiroki Muraoka	043888-0521	3418
53080 7590 11/04/2009 MCDERMOTT WILL & EMERY LLP 600 13TH STREET, NW WASHINGTON, DC 20005-3096				
EXAMINER				
LI, JUN				
ART UNIT		PAPER NUMBER		
1793				
MAIL DATE		DELIVERY MODE		
11/04/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/594,276

Applicant(s)

MURAOKA ET AL.

Examiner

JUN LI

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narukawa (US5508122).

Narukawa teaches a method for battery comprising a spiral electrode unit with leads unit with positive leads (item 12 figure 2) established at exposed regions of conducting electrode core material (item 11, Figure 2) including a positive electrode strip (item 1, Figure 2) which is conducting core material covered with active material; a negative electrode strip (item 2 Figure 2) which is conducting core material (item 21) covered with active material, and which is laminated with the positive electrode strip via a separator (item 3 Figure 2, column 2 lines 54-line 66). Narukawa also discloses the positive electrode lead (item 12 figure 2, 3) is sandwiched through separator material by positive electrode core and by separator (column 3 first 8 lines). Narukawa further teaches leads 512 (positive) and 522 (negative) (figure 4, 5) are assembled with lead surfaces adjacent through separator material to electrodes of opposite polarity (column 3 lines 38-44), which indicates a positive electrode lead connected to adjacent to a negative electrode strip via separator material.

Narukawa fails to expressly teach the first, second and third winding turn as recited in the instant application.

However, from the winding method as shown by Narukawa as discussed above (column 2 lines 54-67 and column 3 lines 1-8, 38-44, Figure 2,3, 4, 5), a positive lead (item 12/512 Figure 2/ 4) can be connected to the exposed portion of the positive electrode strip via separator (column 1 lines 38-43), a first winding turn is expected outwardly adjacent to a positive lead (item 512 Figure 4) with the separator (item 53 Figure 4), and a second winding turn is also expected outwardly adjacent to the first winding turn with the separator (item 53 Figure 4) interposed there comprising a portion of the negative strip (item 52) carrying the negative electrode material, a third winding turn in the electrode assembly is outwardly adjacent to the second winding turn with the separator (item 53 Figure 4) interposed there comprising a portion of the positive strip (item 51) carrying a positive material layer. Narukawa further teaches a better electrode spiral unit with a better internal shorting damage prevention and a simple electrode unit assembling process(column 1 lines 24-28, Table 1, 2) can be achieved by adjusting different length of the winding components (as shown in embodiment A1 and comparative example).

It would have been obvious to one ordinary skill in the art to adjust different winding component position and the winding method as taught by Narukawa to improve the spiral electrode unit property and simplify the winding process.

Response to Arguments

Applicant's response filed on 08/27/2009 has been acknowledged and previous objection to abstract has been withdrawn due to applicant's amendment.

Applicant's arguments have been fully considered but they are not persuasive. In response to applicant's argument that Narukawa not specifically teaching the recited three winding turns, it is noted that Narukawa teaches a substantially similar winding process as the instant application wherein first winding turn including positive electrode lead (item 12) which can connect to the exposed positive electrode (i.e. part of the electrode strip with no active material), separator (item 3) (Fig 1-3) and a second winding turn including negative electrode conducting core (item 21) which is coated with negative material (col 2 ln 43-52) (Fig 1-3) and separator, and a third winding turn including positive electrode conducting core (item 11, Fig 1-3) carrying active positive material (col 2 ln 27-36). Narukawa also teaches the electrode is strip shaped similar as recited in the instant claim " a strip-shaped" positive electrode plate. Furthermore, applicant admits that Narukawa teaches similar positional relation between the positive electrode lead and the end of the winding start side of the negative electrode material mixture layer (response page 5 second paragraph). As for the electrode strip with active material length, it would have been obvious to one of ordinary skill in the art to adopt a proper length of the electrode via routine optimization to make a desired battery. In addition, adopting known techniques to improve efficiency of similar method/apparatus is well within the scope of one ordinary skill in the art.

Thus all the limitation are either expressly taught or expected from Narukawa as set forth clearly in the rejections absent evidence to the contrary.

It is noted that mere argument is not sufficient to overcome the rejection without solid data as backup.

Conclusion

All the claims are rejected for the reasons of record.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUN LI whose telephone number is (571)270-5858. The examiner can normally be reached on Monday-Friday, 8:00am-5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Mayes can be reached on 571-272-1234. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JUN LI/
Examiner, Art Unit 1793
10/23/2009

/Melvin Curtis Mayes/
Supervisory Patent Examiner, Art Unit 1793